

## ABSTRACT

A sensor for color and depth information capture is disclosed. A filter passes selected wavelengths according to a predetermined pattern to the sensor. The sensor measures light intensities passed by the filter. In one embodiment, the wavelengths passed by the filter correspond to red, green, blue and infrared light. The intensity values can be used for interpolation operations to provide intensity values for areas not captured by the sensor. For example, in an area corresponding to a pixel for which an intensity of red light is captured, interpolation operations using neighboring intensity values can be used to provide an estimation of blue, green and infrared intensities. Red, green and blue intensity values, whether captured or interpolated, are used to provide visible color image information. Infrared intensity values, whether captured or interpolated, are used to provide depth and/or surface texture information.